

REMARKS**INTRODUCTION:**

In accordance with the foregoing, claims 11 and 24 have been canceled without prejudice or disclaimer, and claims 5, 9, 21, and 25-27 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 5-7, 9, 21 and 25-27 are pending and under consideration. Reconsideration is respectfully requested.

TELEPHONE INTERVIEW WITH EXAMINER:

Since it appeared that the only issues remaining were clarification of the terminology, a telephone interview with participants Examiner Marjorie A. Moran and Applicants' attorney Darleen J. Stockley was held on January 29, 2007. Limitations of independent claim 5 were discussed in regard to amending the other independent claims in similar fashion. The Applicants thank the Examiner for her assistance in this matter.

REJECTION UNDER 35 U.S.C. §112:

In the Office Action, at pages 2-4, claims 5-7, 9, 11, 21 and 24-27 were rejected under 35 U.S.C. §112, second paragraph, for the reasons set forth therein. This rejection is traversed and reconsideration is requested.

Claims 11 and 24 have been canceled without prejudice or disclaimer. Hence, the rejection of claims 11 and 24 under 35 U.S.C. §112, second paragraph, is now moot.

Independent claim 5 has been amended for clarity. Independent claims 21, 25, 26 and 27 have been amended in similar fashion.

For example, for clarity in claim 5, the amendment shown below, wherein the terminology "determining that a point is a candidate..." is moved to precede the terminology "minimized root mean square distance (rmsd) values..." is based on page 56, lines 5-16 of the specification because it clarifies that a candidate is determined and when attributes coincide, rmsd values are compared:

generating, by a superposition calculating unit, a combination of correspondences comprising generating a the combination by generating a decision tree having at least one retrieval path, the decision tree being based on determining that a point is a candidate if an attribute of an element of the first point set includes a type of an atom, an atomic group, a molecule, a hydrophilic property, a hydrophobic property, or a positive or negative charge that coincides with an attribute of an element of the second point set, and based on minimized root mean square distance (rmsd) values between the first and second point sets, setting a predetermined threshold value and pruning a retrieval path if

~~an attribute_rmsd value of a candidate for the combination of correspondences point is greater than the predetermined threshold value to generate a restricted set of candidates, and determining that a point is the candidate if an attribute of an element of the first point set includes a type of an atom, an atomic group, a molecule, a hydrophilic property, a hydrophobic property, or a positive or negative charge that coincides with an attribute of an element of the second point set, and refining the elements of the first and second point sets based on coinciding attributes of the elements of the first and second point sets to provide a first subset and a second subset, respectively;~~

The terminology “a hydrophilic property, a hydrophobic property, ...” refers to functions and properties as set forth in “(6) Refining of candidates based on an attribute of a point,” page 36, line 36 through page 37, line 10, wherein it recites:

The number of candidates for a point to be related can be reduced by using an attribute of the point in relating an element a_i of a point set A to an element b_j of a point set B. The attributes of the point, for example, include the type of an atom, an atomic group, and a molecule, the hydrophilic property, the hydrophobic property, and the positive or negative charge. It is determined whether the point is selected as a candidate by checking whether these attributes coincide. (emphasis added)

Claim 5 has been amended to recite, in part: “displaying, by a graphic display unit, the three-dimensional structures of the predetermined amino acid sequence probe and the protein molecule target in an overlapped manner based on the generated combination of correspondence and minimized root mean square distance values.” Hence, amended claim 5 is now submitted to be allowable under 35 U.S.C. §112, second paragraph with respect to the terminology “the three-dimensional structures of the predetermined amino acid sequence probe and the protein molecule target.”

Since claims 6, 7, and 9 depend from amended claim 5, claims 6, 7, and 9 are allowable under 35 U.S.C. §112, second paragraph, for at least the reasons amended claim 5 is allowable under 35 U.S.C. §112, second paragraph.

The Examiner submits that claims 5, 21, and 25-27 are unclear with respect to the terminology “a candidate for the combination of correspondence.” It is respectfully submitted that, for example, as described on pages 29-37 of the specification, it recites: “Fig. 14B shows an example of correspondence in the case where a point set A includes three elements, i.e., the correspondence between the point set $A = \{a_1, a_2, a_3\}$ and the point set $B = \{b_1, b_2, b_3\}$ A dotted line represents generated candidates, and a solid line represents an optimum correspondence (a_1 and b_2 , a_2 and b_3 , a_3 and b_4) among all the generated candidates. ... Accordingly in generating correspondence between these sets, it is designed to generate an optimum combination in view of the geometric relationship within the respective sets, the threshold value condition, and the attribute of points described in detail in (4), (5), (6) below.” (emphasis added).

Hence, it is respectfully submitted that candidates are generated, for example, as set

forth for FIG. 14B, and the candidates are candidates for the combination of correspondence. The optimum combination, for example, with respect to FIG. 14B, is determined using the geometric relationship within the respective sets, the threshold condition and the attribute of points as set forth on pages 29-37 of the specification. It is respectfully submitted that amended claim 5 clarifies how candidates are generated. Hence, it is respectfully submitted that the terminology "candidate" is clear to one skilled in the art.

Thus, independent claim 5, and similarly independent claims 21 and 25-27, are respectfully submitted to be clear and allowable under 35 U.S.C. §112, second paragraph, with respect to the terminology "candidate." Since claims 6, 7, and 9 depend from claim 5, claims 6, 7, and 9 are clear and allowable under 35 U.S.C. §112, second paragraph, with respect to the terminology "candidate" for at least the reasons claims 5 and 21 are clear and allowable under 35 U.S.C. §112, second paragraph, with respect to the terminology "candidate."

Claim 9 has been amended to recite: "The method of claim 5, wherein the generating the combination of correspondences is based on a condition such that a-an attribute value of a candidate for the combination of correspondence satisfies a predetermined threshold value ~~condition~~." Hence, claim 9 is now submitted to be clear. That is, the generating the combination by generating a decision tree having at least one retrieval path includes the generating the combination of correspondences is based on a condition such that an attribute value of a candidate for the combination of correspondence satisfies a predetermined_threshold value so that pruning is taking place as the generation of (candidates for) the combination of correspondences is taking place. Hence, it is respectfully submitted that amended claim 9 is clear and allowable under 35 U.S.C. §112, second paragraph, with respect to the terminology "threshold value."

CONCLUSION:

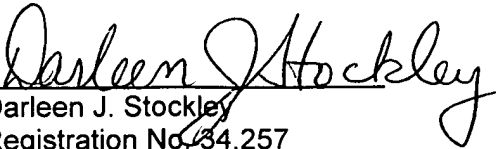
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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